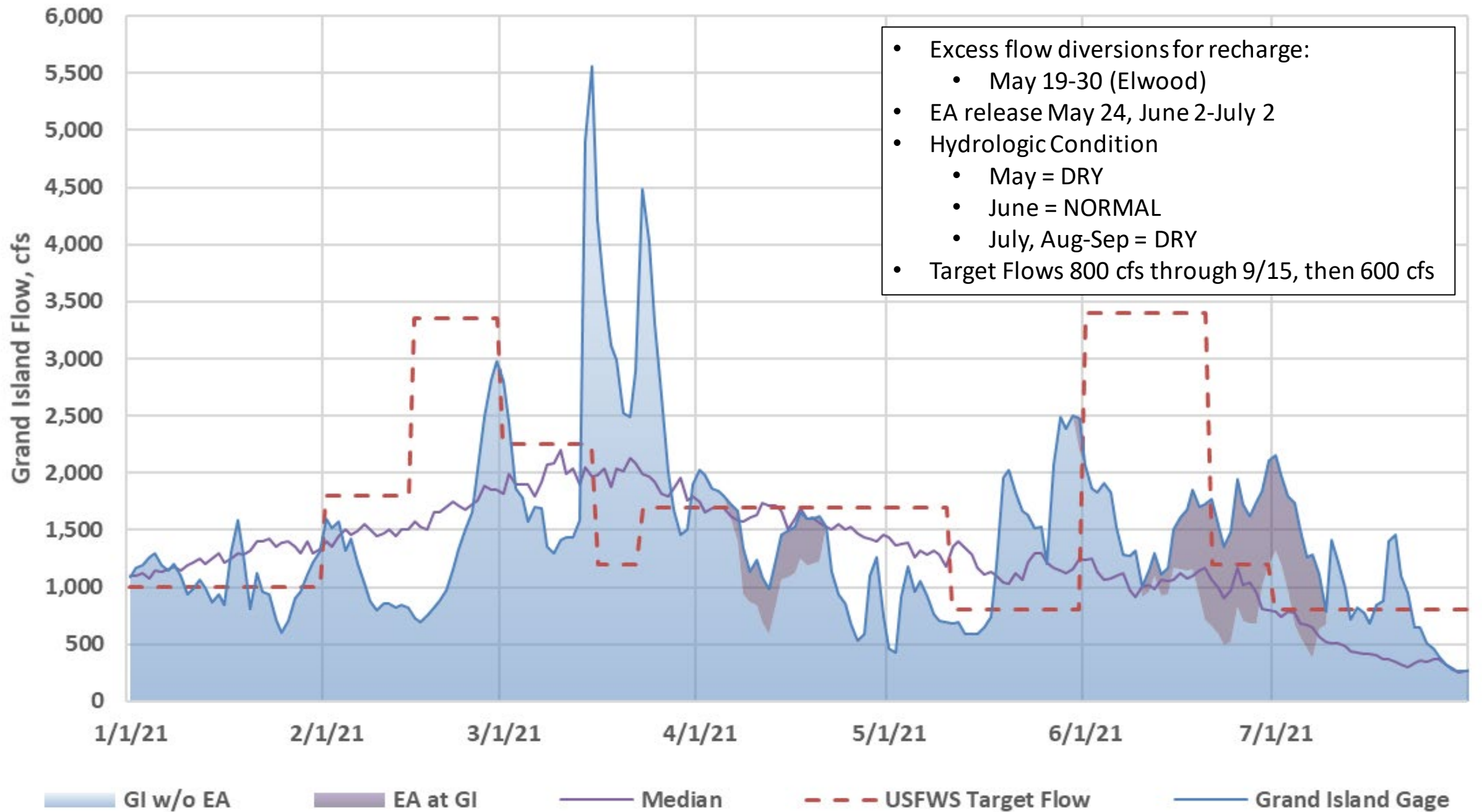


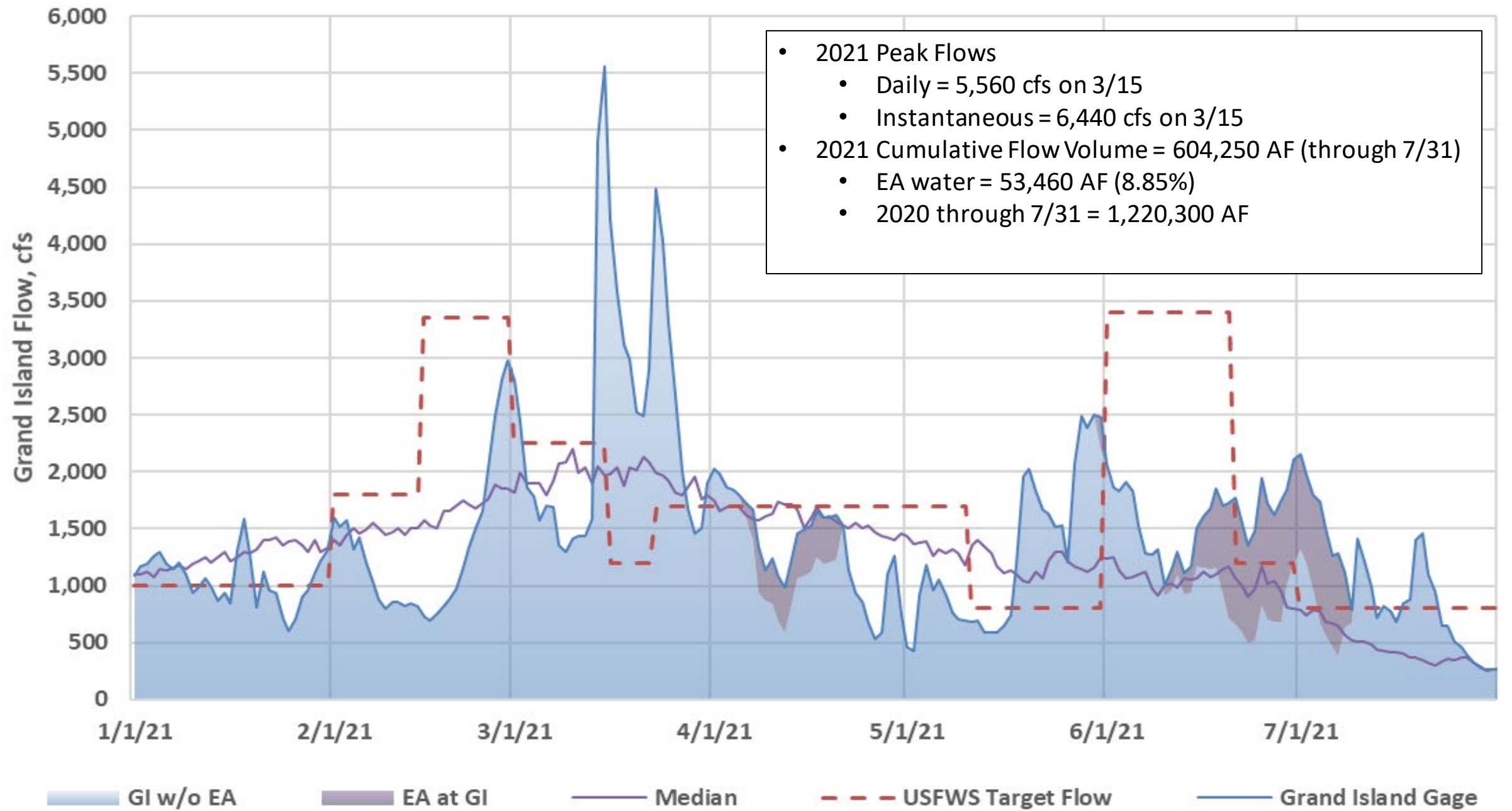
Platte Basin Hydrology Update

PRRIP Water Advisory Committee

August 3, 2021

Seth M Turner, PE





U.S. Drought Monitor

High Plains

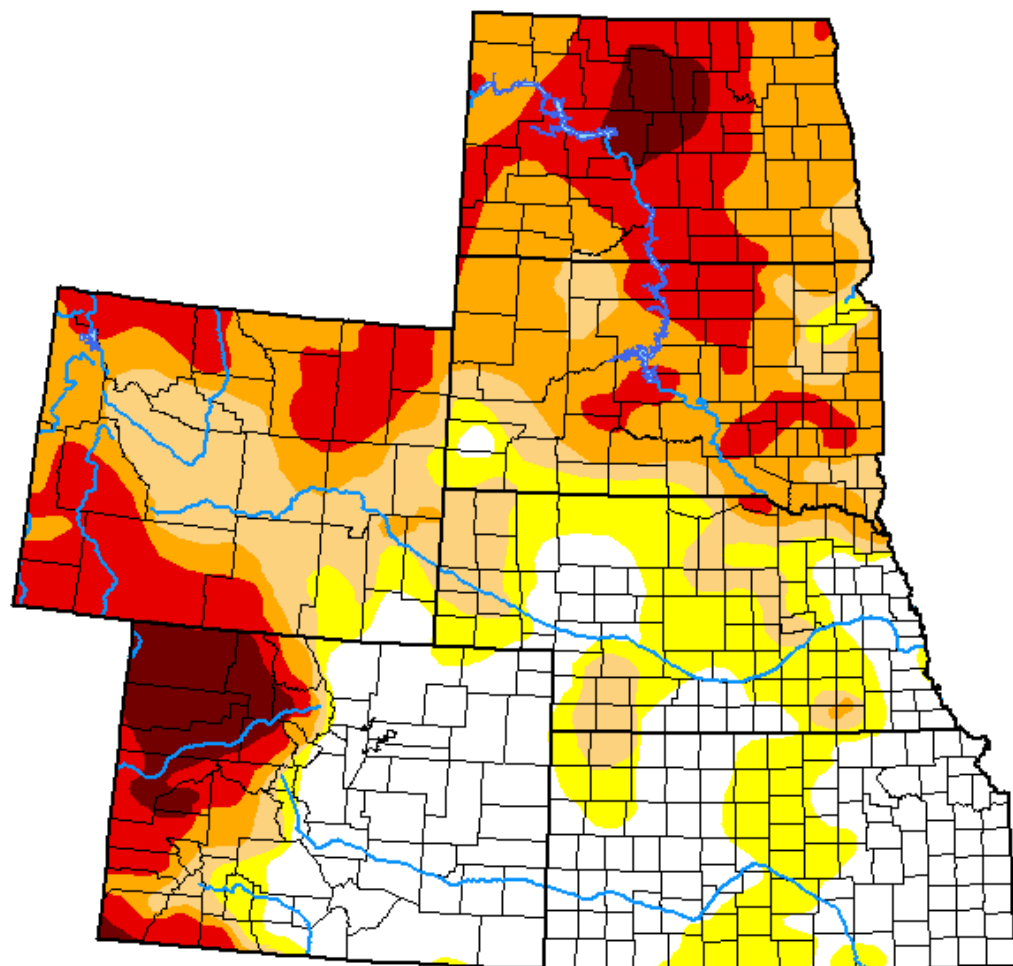
July 27, 2021

(Released Thursday, Jul. 29, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	28.07	71.93	57.34	43.19	21.94	4.61
Last Week 07-20-2021	27.78	72.22	56.04	42.66	21.60	4.90
3 Months Ago 04-27-2021	18.35	81.65	63.52	40.57	22.13	3.41
Start of Calendar Year 12-29-2020	3.82	96.18	82.46	50.36	27.09	5.71
Start of Water Year 09-29-2020	6.73	93.27	62.11	36.56	16.16	0.54
One Year Ago 07-28-2020	31.83	68.17	42.15	20.17	6.49	0.00



Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

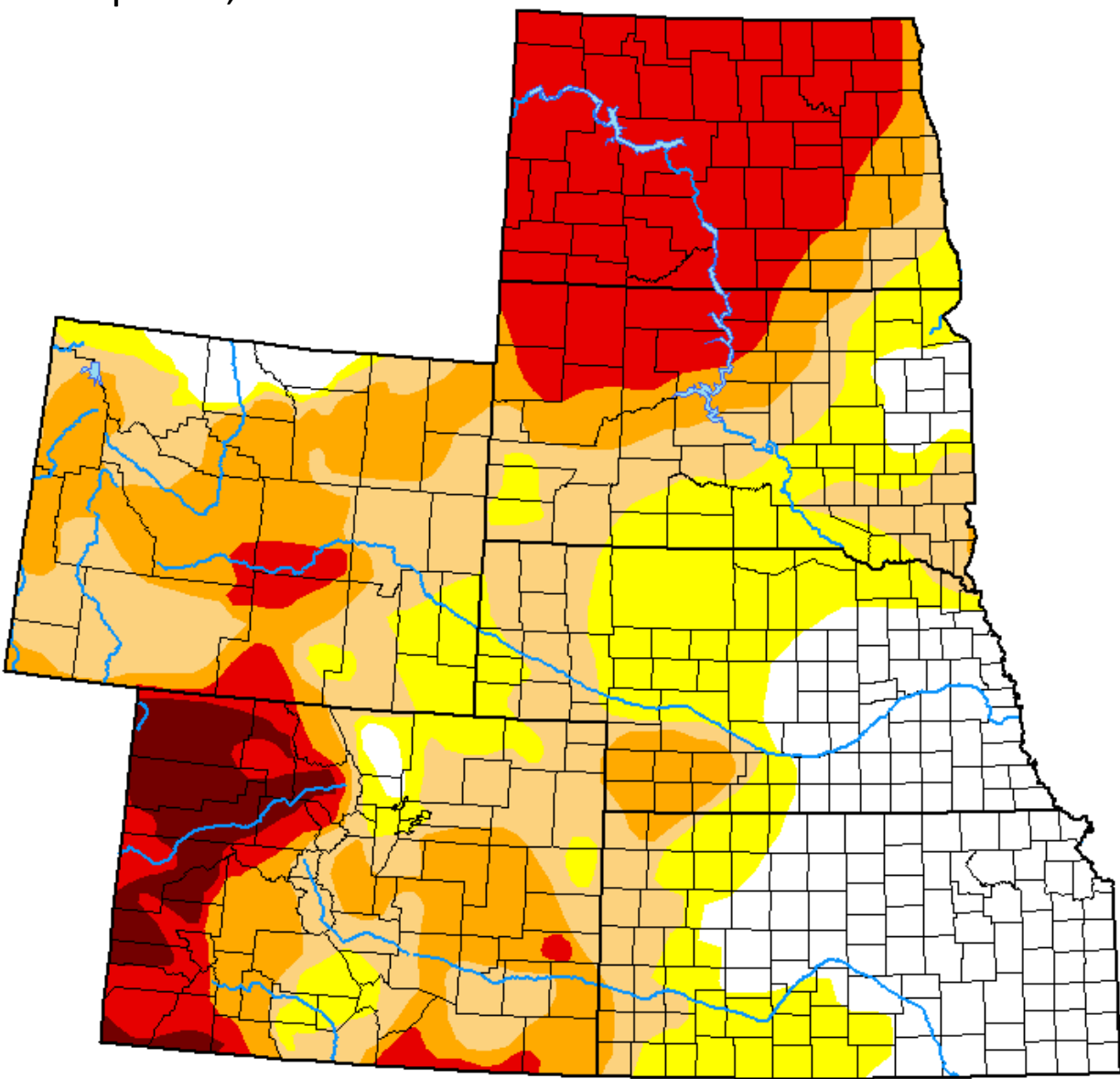
Author:

Brad Rippey
U.S. Department of Agriculture

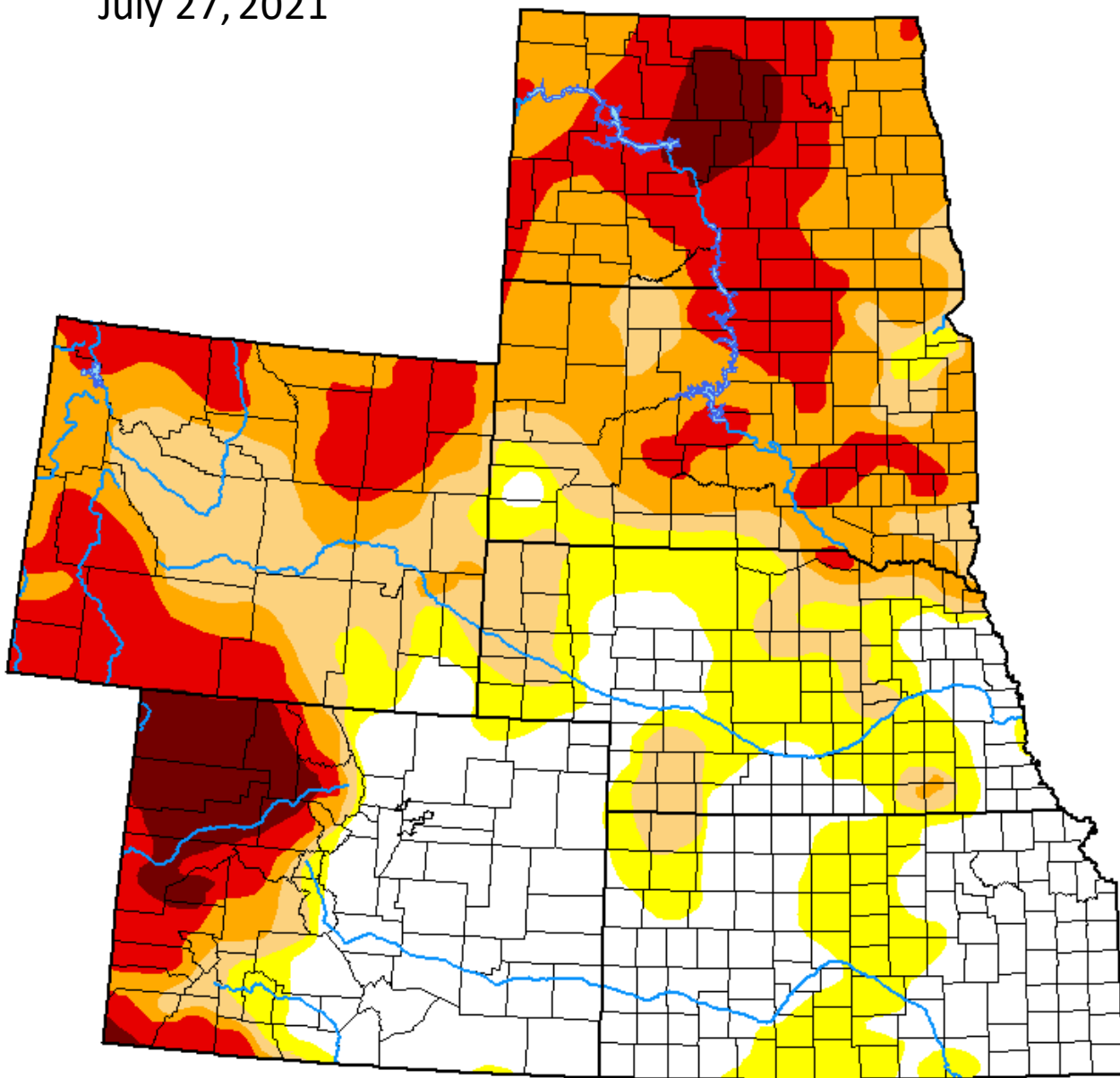


droughtmonitor.unl.edu

April 27, 2021



July 27, 2021



U.S. Drought Monitor West

July 27, 2021

(Released Thursday, Jul. 29, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.95	99.05	95.55	86.18	64.60	24.63
Last Week <i>07-20-2021</i>	0.88	99.12	95.25	85.75	65.42	28.03
3 Months Ago <i>04-27-2021</i>	4.18	95.82	83.18	67.13	48.25	23.78
Start of Calendar Year <i>12-29-2020</i>	13.52	86.48	75.49	63.25	45.40	23.76
Start of Water Year <i>09-29-2020</i>	9.96	90.04	73.14	51.29	32.19	2.50
One Year Ago <i>07-28-2020</i>	29.34	70.66	54.91	26.71	4.52	0.00

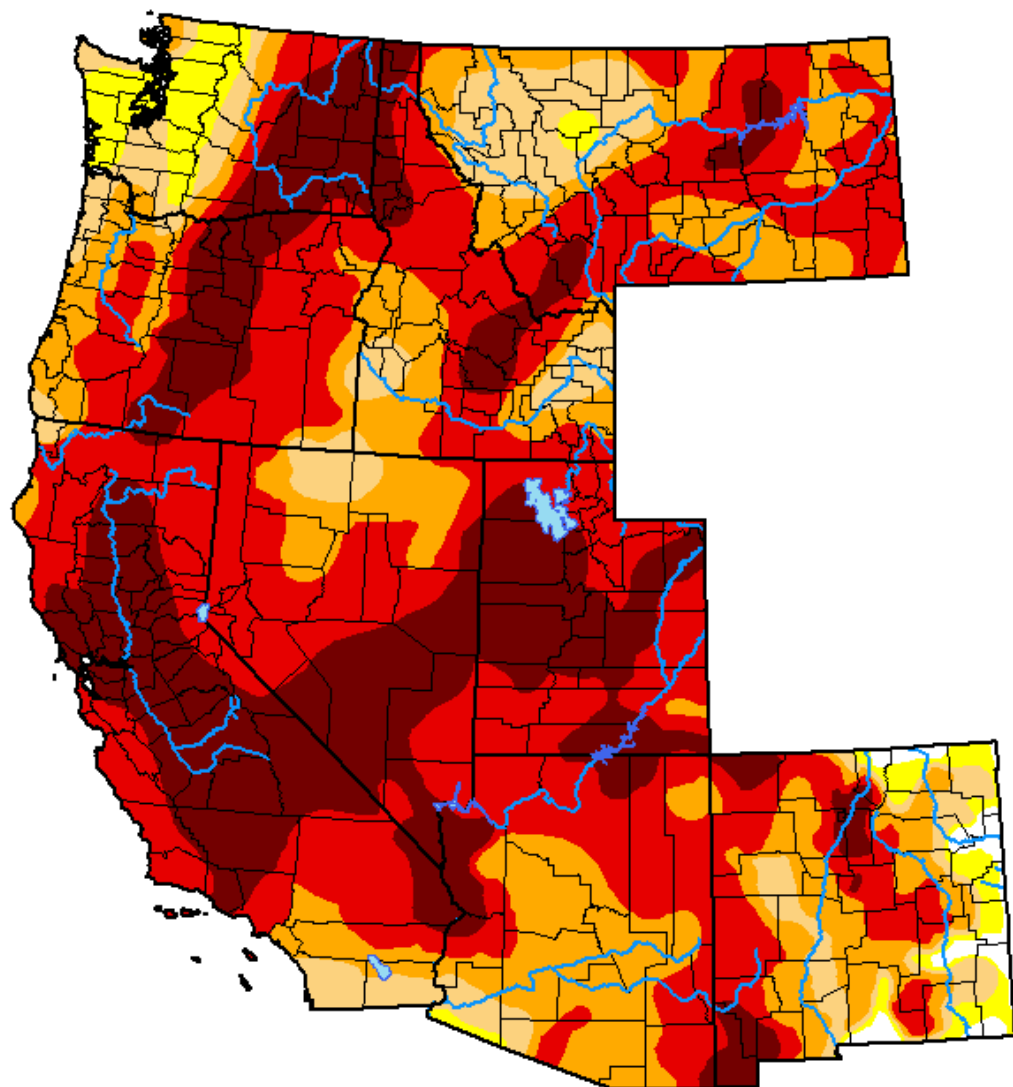
Intensity:

 None	 D2 Severe Drought
 D0 Abnormally Dry	 D3 Extreme Drought
 D1 Moderate Drought	 D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

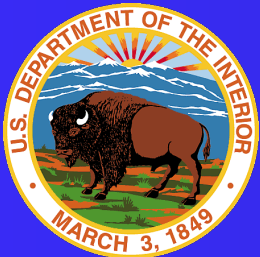
Brad Rippey
U.S. Department of Agriculture



droughtmonitor.unl.edu

Environmental Account Update

WAC
August 3, 2021



U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources



Topics

- EA volume summary
 - Looks good
 - ~126 kaf on Oct 1, 2021
 - ~166 kaf by May 1, 2022
- Releases this Water Year
 - Spring Whooping Crane – 12.5 kaf
 - Germination Suppression - 57 kaf



U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources



EA Carryover Accounting

April 2021 – May 2022

Asset/Debit	Volume (acre feet)
March 31, 2021 Volume (DNR)	167,562
Est. 10% SNI Estimate (Apr)	5,200
Est. Pathfinder Delivery (EA & WY)	9,500
Spring Whooping Crane Release	-12,500
Est. June-July Germination Suppression Release	-57,000
Evaporation & Seepage Loss (Apr-Sep)	-5,300
Estimated WY21 EA Carryover	107,462
Estimate Volume 2021-Oct-1	126,000
Estimated Volume 2022-May-01	166,000



U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources



Whooping Crane Release

- Release 30-Mar to 13-Apr
 - 12,496 af released
 - 10,788 af at Grand Island
 - 86 percent of total release
 - Approximately 12 cranes on Central Platte



U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources



Germination Suppression Flow

- Target – 2,000 cfs from June 1 to mid July
- Release volume
 - Average ~ 68 kaf (dry conditions)
- Actual
 - 2-June to 2-July
 - 57 kaf (normal conditions)
 - “Perfect Release” (June) 93 kaf

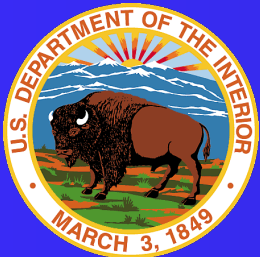


**U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources**



Flow Requirements

- 1500 to 2000 cfs at Grand Island
- June to mid-July
- Quick recession

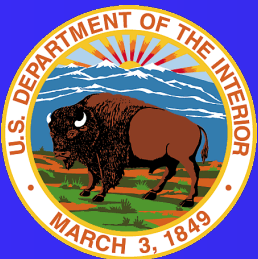


**U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources**



Challenges

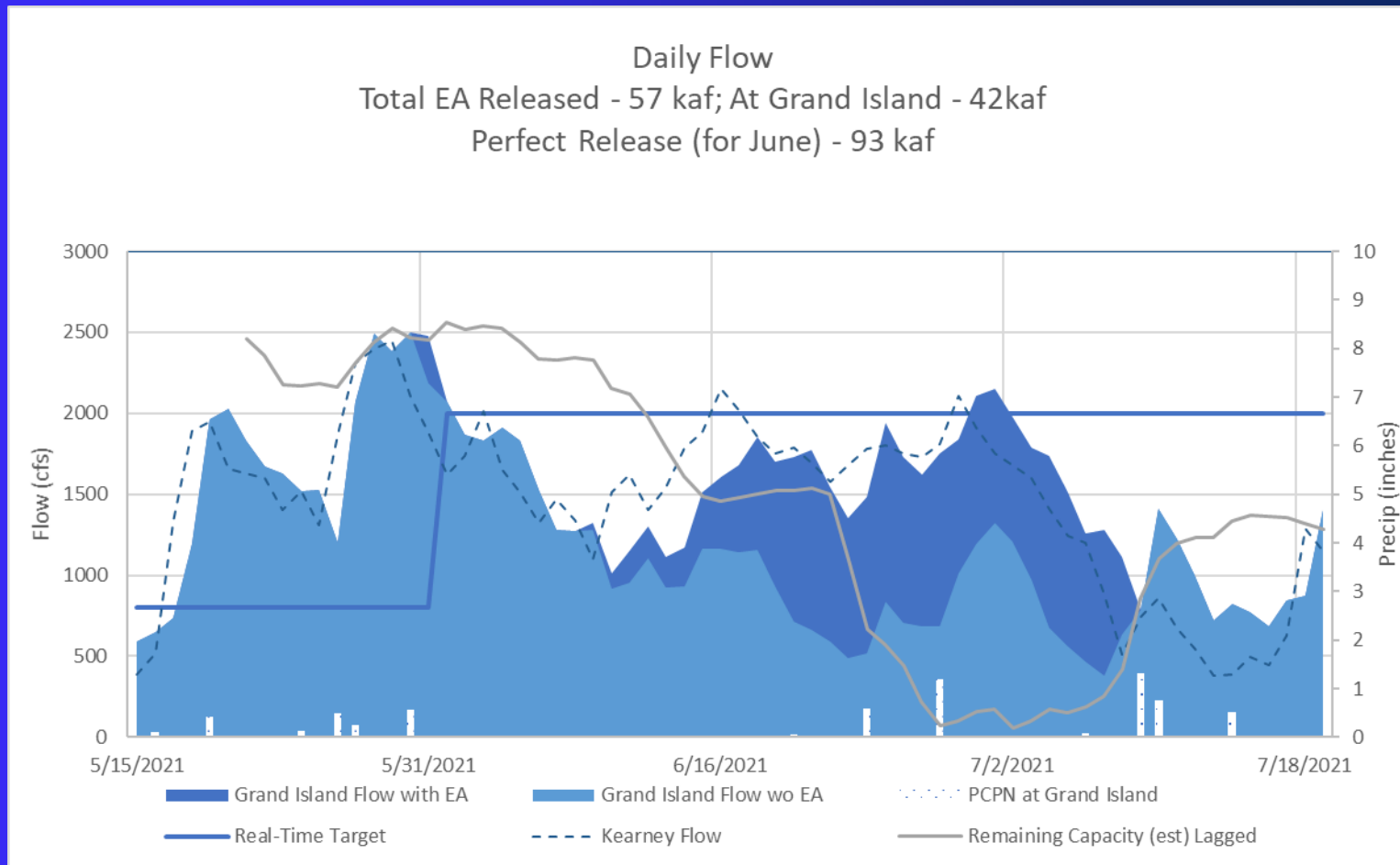
- Approximately 7-day travel time
- Chokepoint Capacity
- Near peak climatological thunderstorm activity
- Ramp up rate
- Hydrocycling (or benefit)
- Carryover



**U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources**



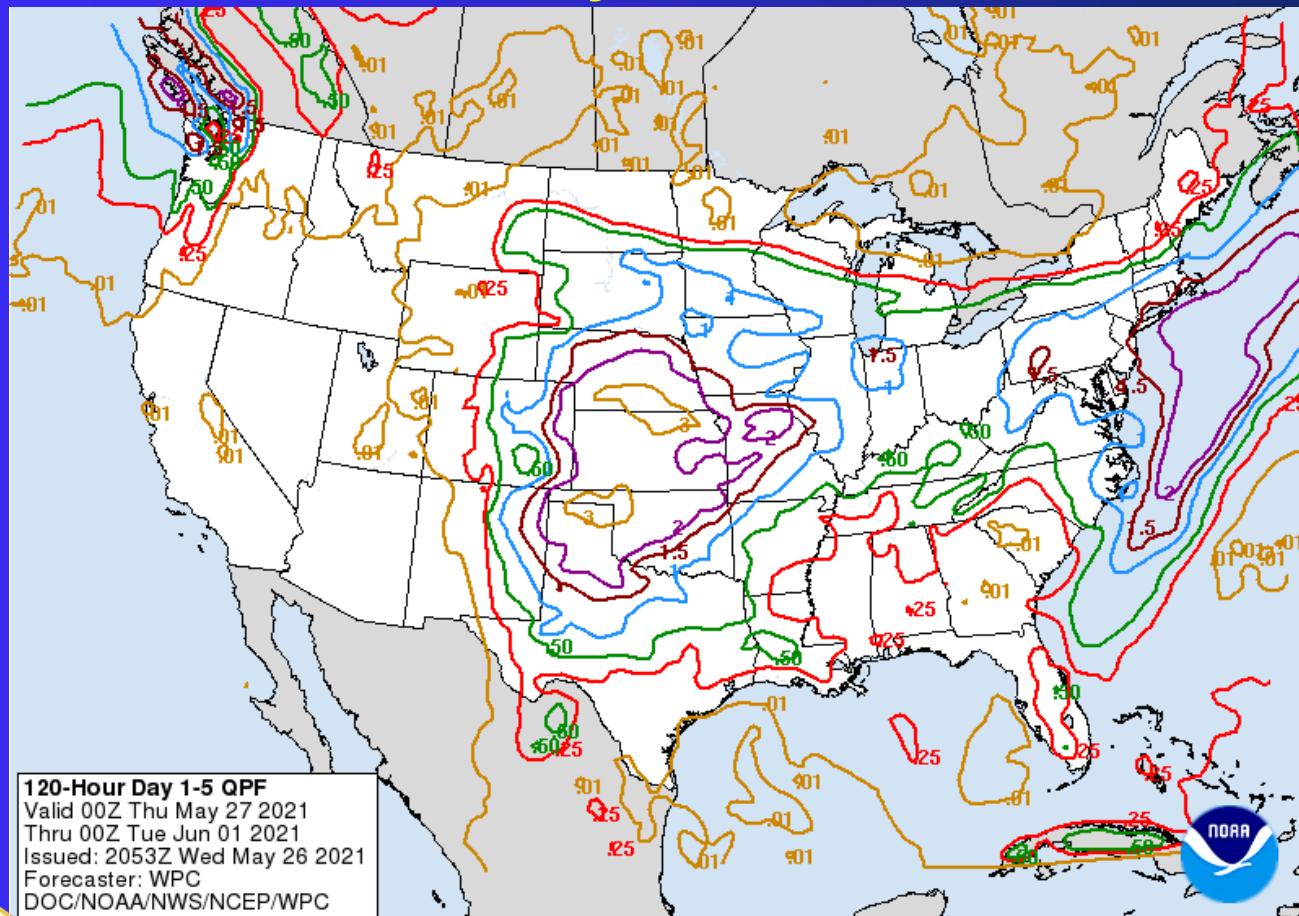
Grand Island Flow Components



U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources



Five Day Rainfall Forecast 27-May to 1-Jun

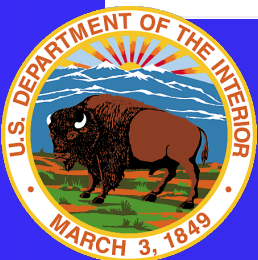
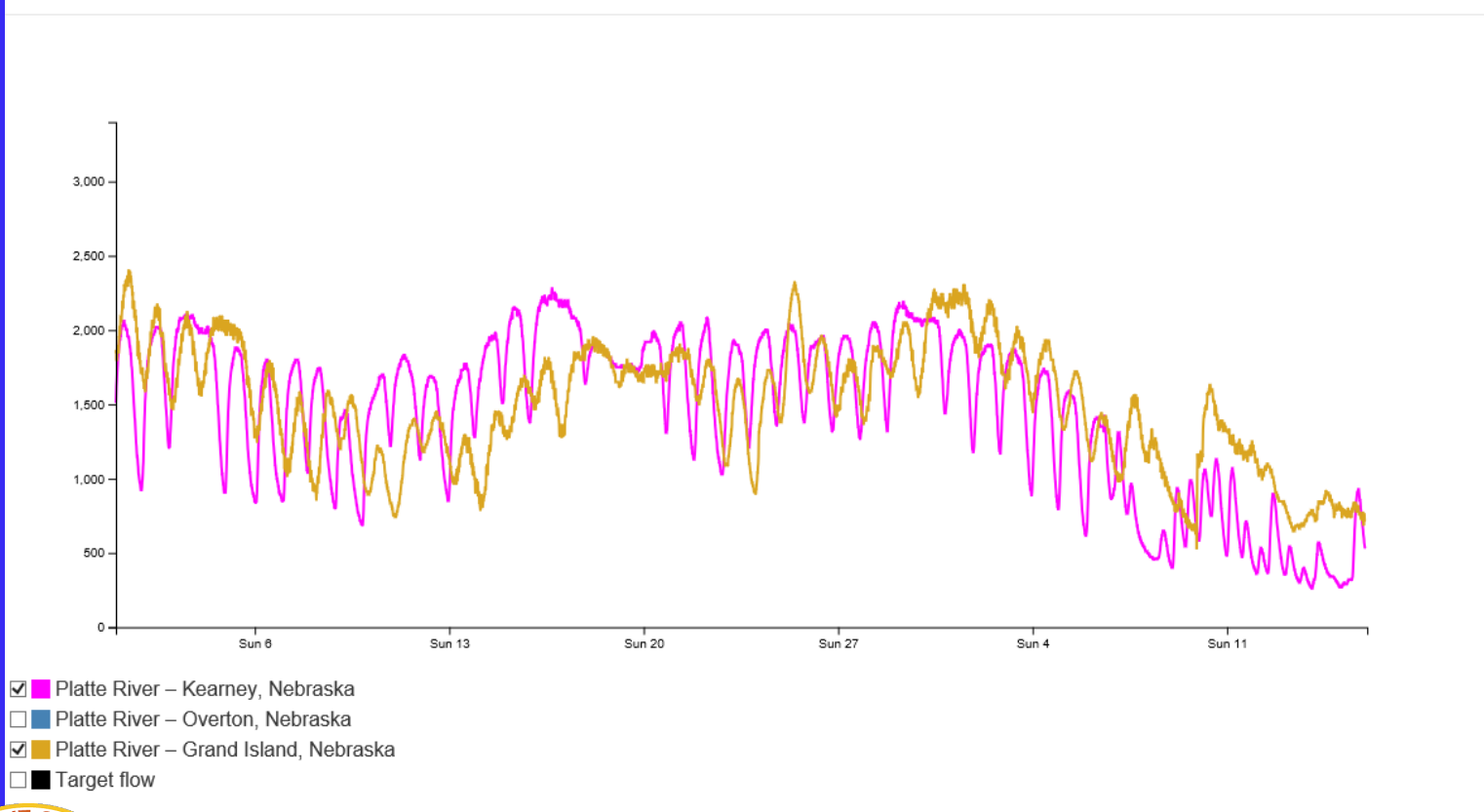


**U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources**



Hydrocycling at Grand Island and Kearney

River Flow Data

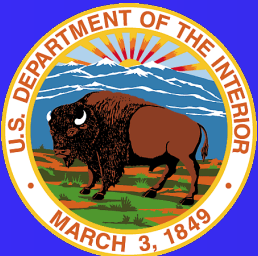


**U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources**



Tools

- MBRFC Ensemble Forecast
- Quantitative Precipitation Forecast
- Weather Discussions
- Program's River Flow Tool
- USGS Gaging
- South Platte Point Flow
- NeDNR's Decisions Support & PWAP
- Nice to have - real-time river forecast

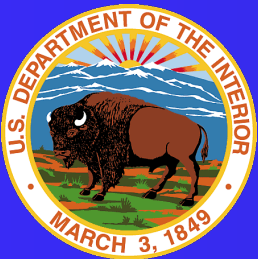


U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources



Lessons Learned

- Hedge Risk
 - Plans (and forecasts) are not 100 percent correct
 - Step up the ramp
 - State a minimum when briefing
- Accelerate when road is clear
 - Use both North Platte and Sutherland if practicable
- Prioritize
 - Know what's most important
 - Daily maximum vs daily mean
 - Carryover versus meeting exceeding target
- None of us is smarter than all of us

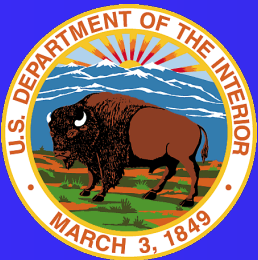


U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources



Coordination

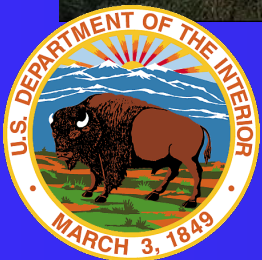
- Many thanks to
 - Tyler Thulin
 - Jeremy Gehle
 - Jason Farnsworth/ Seth Turner
 - Jeff Runge



**U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources**



Rowe Sanctuary (3-Aug-2021)



**U.S. Fish and Wildlife Service
Regions 5 & 7
Water Resources**

